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KANSAS STATE MANUAL TRAINING NORMAL

HOUSEHOLD ARTS

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BULLETIN

KANSAS STATE
MANUAL TRAINING NORMAL SCHOOL

DEPARTMENT OF HOUSEHOLD ARTS AND SCIENCES

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A Class in Drafting.

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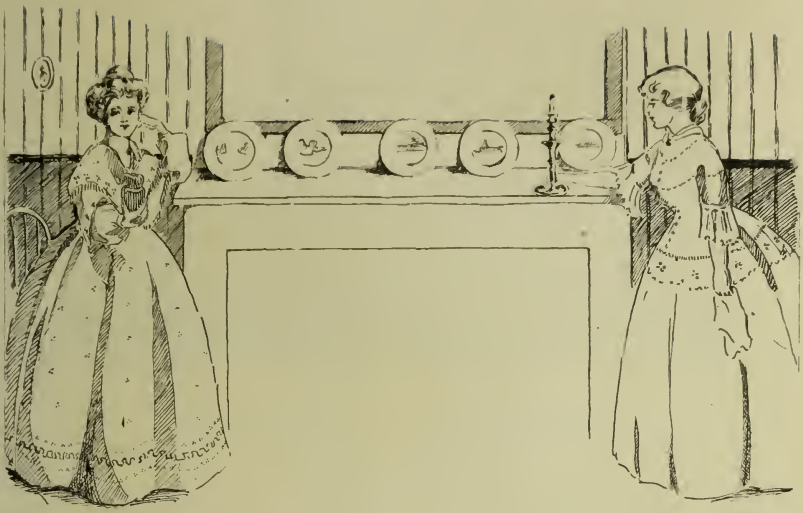
A Group of Home-economics Seniors.



Department of Home Economics.

The Department of Household Science and Arts of the State Manual Training Normal School of Pittsburg, Kan., is of college and secondary grade in both household science and the household arts. There are both day and evening classes; there is a four-year college curriculum leading to a degree of Bachelor of Science in Home Economics. A life certificate is given for two years' work of college grade.

Beginning with the fall session of 1915 the courses in Home Economics will be planned with reference to the needs of two classes of students: (1) young women who are preparing to teach home-economic subjects in the public schools; (2) women who wish to acquire a knowledge of the household arts, preparatory to greater efficiency in housekeeping.

THE HOME.

Perhaps in no field of work in the universe are there as many people working, who have had no special training for the work they are doing, as among the great body of women who have assumed the responsibility of making a home.

For generations the duties connected with the field of home-making have been regarded as "women's work," and they have been undertaken by young women who have gleaned what knowledge they could from the great practical school of experience; but this has proven among the great majority to be inefficient and unsufficient training.

Is it any wonder that the girl of eighteen or twenty who has never had an hour's instruction in the scientific and esthetic interpretation of those duties which confront her when she becomes a wife and a mother should find no pleasure in housekeeping?

Dr. James E. Russell, dean of Columbia University, says:

> "If there is any one who thinks that getting married relieves a woman of work and responsibility let him try it and see for himself. If there is any occupation that induces greater physical strain and nervous waste, any profession that calls for more of the moral virtues or profits more from the use of common sense than the profession of wife and mother, I should like to know what it is."

When one of our foremost men in the field of education considers the profession of home-making of such magnitude and proportion, we can hardly pass it by as "woman's work," and rely on instinct and a chance training as sufficient to carry on the work successfully. For the benefit of those who wish to avail themselves of training in the household-arts subjects and have not met the requirements necessary for college or university entrance, we are opening this course for housekeepers.

THE HOUSEKEEPER'S COURSE.

We believe that this field of practical education for girls should be open to any girl who wishes to better fit herself to make a home. Accordingly we are opening a training course for women who wish to take a one-year or a two-year course for their own personal development and more thorough training for home-making. There are no entrance requirements for this course other than those of good moral standing. Students who take this course are not prepared to teach in the public schools.

Pottery.

HOUSEKEEPERS' COURSE OUTLINED.

ONE-YEAR COURSE.

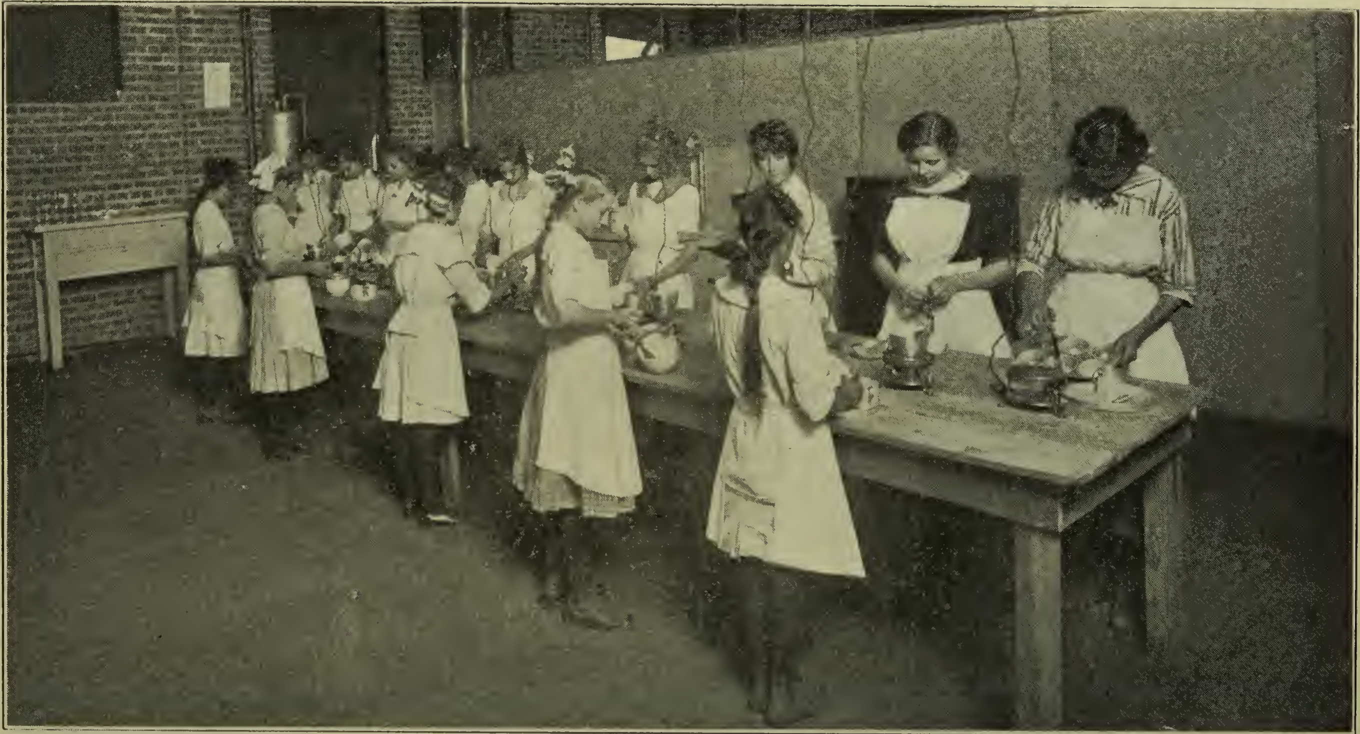
First Semester.

Principles of Cookery.
Care of the House.
Household Bacteriology.
Plain Sewing.
House Furnishing and Interior Decoration.
Physiology of Digestion.
Emergency Nursing.

Second Semester.

Advanced Cookery and Serving.
Care and Diet of Children.
Care and Diet of the Sick.
Laundry Work.
Dietaries for the Family.
Household Crafts.
Household Management.
Sewing—Dressmaking.

Household Crafts.



Grade Class in Cookery.

DRESS OF THE MODERN SCHOOLGIRL.

The primary object sought in our schools to-day is the development of pure womanhood. Without this, education is a failure. Pause for a second and form a mental picture of the average schoolgirl of to-day. How does she compare with the girl of ten years ago? All traces of simplicity, plainness and common sense have disappeared from her dress.

Many schoolgirls do not stop to consider what is appropriate in dress for their age, but are imitators of fashion. A freaky fashion spreads throughout a school like wildfire. Girls of the high-school age imitate some leader in dress, walk and manner. What if this leader has not the correct ideals, but is a representative of the schoolgirl of to-day, one wearing large frills, lace waists, beribboned underwear, silk petticoats and hosiery, low necks and toe slippers, then the result is anything but desirable.

Ida Tarbell says: "The folly of woman's dress lies not in the instinct to make herself beautiful, it lies in her ignorance of the principles of beauty, of the intimate and essential connection between utility and beauty. It lies in the pitiful assumption that she can be the thing she envies if she looks like that thing."

So with the schoolgirl who, through unsuitable dressing, has lost all of her individuality and has become one who does not study line, color, utility or appropriateness, but has sacrificed everything that goes to make up a well-dressed woman; for what? nothing but style. Her motto is: Adopt the latest fad, whatever may be the sacrifice.

What about the discontent among those who can ill afford foolish finery? Many a home is made unpleasant by demands for clothes that can not be furnished. No amount of reasoning and explaining will convince the average girl that such clothing is not only poor economy, but poor taste as well. Her one aim is to be a leader of fashion.

If home influence is lax in regard to dress, then the school should come to the rescue and teach the girls that a well-dressed woman is one who does not follow fads, but one who dresses tastefully, neatly, appropriately at all times and for all occasions.

Much has been written about the methods that can be employed to produce a more normal physical development in our growing girls. Proper dressing would aid greatly in solving this problem. Faulty fashions in dress are responsible, to a certain extent, for physical defects. How can any one walk well in such skirts as Dame Fashion has handed out to us lately? The popular stoop of the high-school girl is just a result of the present mode of dressing.

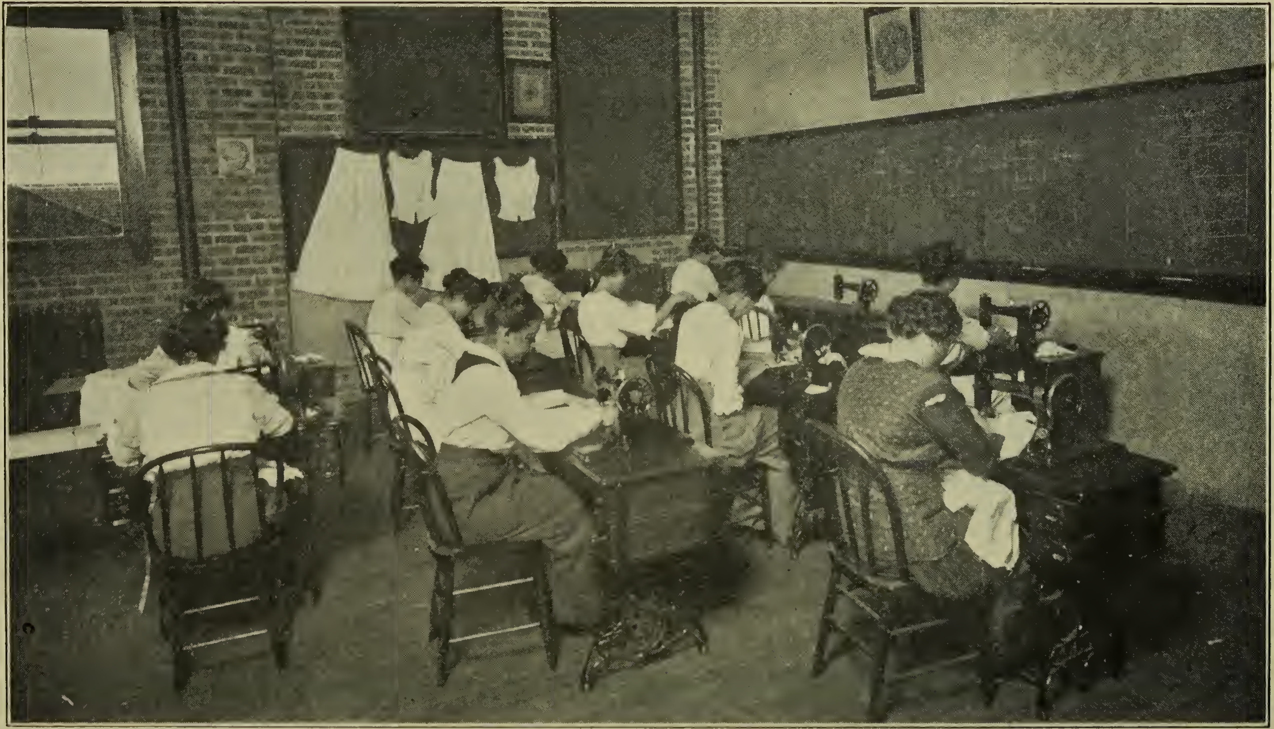
Does any parent or teacher think that the average girl is strong enough physically to withstand the winter weather when dressed is low-cut waist and toe slippers? But such cases are to be cited in every high school to-day.

The general trend of education is toward the development of strong, robust women, who are capable of taking their place in the wage-earning field. If such be the case, then more attention must be given to the dress of the girl, for as the girl dresses so will the woman.

AN "IF" FOR GIRLS.

If you can dress to make yourself attractive,
Yet not make puffs and curls your chief delight;
If you can swim and row, be strong and active,
But of the gentler graces lose not sight;
If you can dance without a craze for dancing,
Play without giving play too strong a hold,
Enjoy the love of friends without romancing,
Care for the weak, the friendless, and the old;
If you can master French and Greek and Latin,
And not acquire, as well, a priggish mien;
If you can feel the touch of silk and satin
Without despising calico and jean;
If you can ply a saw and use a hammer,
Can do a man's work when the need occurs,
Can sing, when asked, without excuse or stammer,
Can rise above unfriendly snubs and slurs;
If you can make good bread as well as fudges,
Can sew with skill, and have an eye for dust;
If you can be a friend and hold no grudges,
A girl whom all will love because they must;
If sometime you should meet and love another
And make a home with faith and peace enshrined,
And you its soul—a loyal wife and mother,
You'll work out pretty nearly to my mind
The plan that's been developed through the ages,
And win the best that life can have in store;
You'll be, my girl, a model for the sages,
A woman whom the world will bow before.

—Elizabeth Lincoln Otis.



The Machine Room.

REMOVAL OF STAINS.

Often a good garment is ruined by some disfiguring stain. Though much patience is generally required to remove such stains, especially if old, yet usually they yield to the right treatment. The following are some directions that have proven helpful. In the case of colored goods it is always best to try the ingredients on a seam or a sample of the goods to find what effect they may have on the color:

Coffee Stains.—Pour boiling water through the stain. If it does not come out, repeat, using boiling water to which has been added a little borax or ammonia water.

In the case of white goods, the following recipe will prove effective: Pour on hot water containing a very little chloride of lime and a few drops of vinegar. Wash in fresh water as soon as the stain is removed.

Tea Stains.—Treat the same as coffee stains.

Fruit Stains.—Treat same as coffee stains, or try the following recipes: Alcohol that has been warmed over hot water softens fruit stains. Soaking in milk is also good. To remove fruit stains from the hands, raw tomato and salt, or lemon juice and salt might be effective. Peach stain should be rubbed with a little glycerine several hours before washing.

Iron Rust.—Soak in lemon juice and salt, or vinegar and salt, and place in the sun. Repeat if necessary. Apply lemon juice and salt, made into a paste with cornstarch, and lay in the sun.

Stretch stained spot over a vessel of rapidly boiling water and apply drops of a ten-per-cent solution of hydrochloric acid, or of oxalic acid, to the spots. Then lower cloth into the hot water, and repeat if needed. Rinse well when done.

One may rub the spots with raw tomato and place in the hot sun.

Ink Stains.—If the following directions do not remove the stains, try the directions for iron rust. When ink is spilled, place blotting paper or salt on it, to absorb as much as possible; then wash with sour milk, or with sweet milk that has been boiled and slightly cooled. Use fresh milk as soon as that in use becomes colored.

Stretch spot and apply a few drops of weak hydrochloric acid, then a few drops of weak ammonia water, rub, rinse, and repeat many times.

Mix equal parts of alum and cream of tartar and moisten with water to make a paste. Spread this on the stain. Repeat if necessary. This does not injure the color.

Soak in a dish of milk, then in turpentine. Let stand several hours, then rub well.

Ammonia will remove ink stains on the hands.

Cocoa Stains.—Soak in cold water, then follow directions for coffee stains.

Milk and Cream Stains.—Wet with weak ammonia, then iron between blotting paper.

Mildew Stains.—Apply strong lemon juice and salt, or vinegar and salt, and place in the hot sun. Buttermilk is also good. May soak in alcohol or rub lard on it and then put in the sun.

If goods are not colored, dip in a solution of one quart of water, in which has been dissolved one heaping teaspoonful of chloride of lime and then strained, for several times. Rinse cloth well and place in the sun. Do not get this solution on the hands.

Grass Stains.—Rub with alcohol, milk or ammonia. Wash-goods may be soaked in coal oil, then washed in soap and water.

Iodine Stains.—Soak spots in chloroform, ether or ammonia. A paste of cornstarch and water or milk often removes fresh stains. Repeat as soon as paste becomes discolored.

Bluing Stains.—An application of ammonia water will often prove effective.

Paint.—Fresh stains on goods that can not be washed should be removed by rubbing in kerosene or gasoline. Old stains must first be softened by allowing lard or oil to remain on the spots for several hours.

Often a mixture of equal parts of ammonia and turpentine is good to soak the stains. Wash in gasoline or soap and water. Hot vinegar is good in the case of cotton goods.

Scorch.—If slightly scorched, place in the sun, or dip in hot solution of borax before placing in the sun.

Grease.—Wash in cold water and soap, if possible, or in coal oil or gasoline. Ironing between layers of blotting paper or wrapping paper is often effective. One may cover the spot with powdered chalk, then with the blotting paper, and let a warm flat stand on it. In the case of silk, a paste of magnesia and water may be left to dry on the spot and then brushed off. Also, a hot solution of strong alum in water is good, or a solution of salt in alcohol.

Girls in the Domestic Art Classes Make Their Own Dresses.

A STUDY IN TEXTILES: ITS RELATION TO THE HIGH COST OF LIVING.

As the cost of living has increased, the average housewife has turned her attention to the reduction of the grocery bill. Much has been written [regarding the adulteration of food materials, and in many states pure food laws have been passed. It is time that woman, if she is to spend four-fifths of the money earned, should realize that as much money is foolishly expended in the purchasing of clothing and household furnishings as for food.

In olden times the clothing for the family was spun, woven and fashioned into garments for the family in the home. With the introduction of machinery, and the establishment of factories, woman's position has changed from that of a producer to a consumer.

Thus, on one hand the field of textile knowledge has grown greatly, while on the other the knowledge of women concerning textile fabrics has decreased.

Even women's knowledge of garment making is rapidly decreasing, for many buy their garments ready-made or have them made outside of the home.

In this day and age, when man has invented so many devices with which to deceive the public, it seems that the housewife should take extra precaution to determine that she is receiving full value for her money. To guard against this deception, a general knowledge of the manufacture and the adulteration of the textile fibers is necessary. Such knowledge will enable the housewife to obtain better values and better satisfaction for the time and for the money expended.

It is the aim of this paper to suggest a few simple tests that will be of use to the housewife.

Cotton is the most common of the textile fibers, the most extensively used, and the cheapest. Cotton is not adulterated by using any of the other fibers, but is made to appear heavier, thicker and more firm by treating the woven cloth with a mixture called sizing. The sizing can be made from starch, glue, dextrine or clay. When a soft finish is desired, the material is treated with glycerin, fats, oils or waxes. This treatment produces a very soft, attractive finish. Cotton can be made to resemble linen by treating with a dressing, then beetling or pressing until a shiny appearance is produced. Mercerized cotton is produced by the action of strong alkalies on the fiber, then rinsing under very high tension. Cotton is made to look like woolen or worsted in various ways, such as weaving, chemical treatment, by animalizing, *i. e.*, treating the cotton so it will dye in a wool bath, dressing and calendering with rollers covered with cloth to give the rough or woolly appearance.

These finishes are all very satisfactory until the material is laundered, when the purchaser realizes that she has paid an exorbitant price for nothing but plain cotton cloth.

TESTS FOR ADULTERATION.

Adulterated cloth, when held to the light, reveals meshes filled with starch.

Sized cloth, when boiled, produces a soft, flimsy fabric. If sizing has been used to a great extent a piece of cloth rubbed briskly will show white powder. Boiling and rubbing will remove the calendered polish from so-called linens and mercerized cottons.

Linen is oftentimes adulterated with cotton, as the two fibers are similar. It is hard to always distinguish heavy starch cotton from linen.

TESTS FOR ADULTERATION.

Linen weaves are usually more difficult to tear than cotton. The torn ends of linen appear unequal in length, parallel fiber, and glossy. Cotton fibers show curling, lustreless threads, of almost equal length. With practice one can become expert in distinguishing between the sound resulting from tearing cotton and linen. Cotton dull and muffled; linen shrill.

The ancient test of moistening the finger and placing it underneath the material to be purchased is not always a sure test. Moisture will not come through extra-heavy linen or well-starched linen, but will come through a thin, tightly twisted piece of cotton. A better test to use is: Treat a piece of linen with a drop of olive oil and place between blotters. Upon examination, linen will appear transparent, while cotton will appear opaque.

The burned ends of cotton thread spread apart, while the burned ends of linen thread appear even and compact.

A simple but good chemical test is to immerse a sample of linen in concentrated sulphuric acid and allow it to remain three minutes. Linen will be unaffected; if cotton is present it will be dissolved.

Wool ranks second in the amount used for clothing, and, being an animal fiber, differs greatly from the other fibers. Because of the fitting properties of wool, it is quite possible to conceal a good deal of cotton under the surface of the woolen cloth.

TESTS FOR ADULTERANTS.

Wool burns slowly, goes out quickly, leaving a gummy residue, and has a very disagreeable odor.

Cotton burns very quickly, is difficult to extinguish, and often continues to smoulder until all of the material is consumed.

It sometimes happens that a piece of cloth, woven with cotton in one direction and woolen in the other direction, will be consumed in the direction of the cotton, leaving the wool intact; or if cotton and wool are carefully mixed in yarn, by unraveling one strand and burning the different fibers in it the cotton will be indicated by the way in which one section will be consumed.

Boil a sample of the material for ten minutes in a five-per-cent solution of sodium hydroxide. The wool present is entirely dissolved, while the cotton remains unaltered.

Place a sample of the material for three minutes in concentrated sulphuric acid; wool remains, while the cotton is dissolved.

Sometimes wool and silk are mixed. A good test is: Place a sample of the material in concentrated hydrochloric acid for three minutes. The wool is unaffected, while the silk is dissolved.

Silk is the most expensive of all the fibers, and has characteristics which make it very easy to adulterate. The manufacturer often yields to temptation and produces silk that is adulterated or weighted.

The public has demanded silk at a low price, so it is no uncommon occurrence to find silk upon the market adulterated with cotton, raw or artificial silk.

A very common practice is the weighting or loading of a cheap, inferior quality of silk, to make it resemble heavy silk.

Silk is weighted by immersing in a bath of sugar of lead, metallic salts, or two phosphate silicate. Weighting of silk results in a mechanical weakness of the fiberment and cutting of the fiber. If perspiration is present in the silk, chlorin is freed, causing the wotting of the silk, or the appearance of pink spots, which later weaken the fiber.

ADULTERATION TESTS.

An old test, often used, was to fold a piece of silk and crease. If a line was visible in the fold, upon reopening the silk, it was a sign that the silk was weighted and would crack.

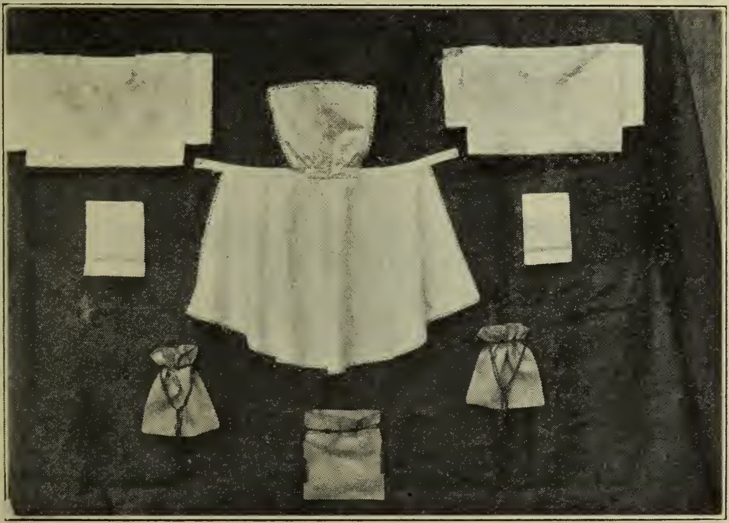
Pure silk burns slowly, leaving as it burns a small amount of ash in the form of a crisp ball at the end, or a crisp edge.

Heavily weighted silk burns, leaving an ash in the form of the original thread or cloth. The ash drops to pieces readily.

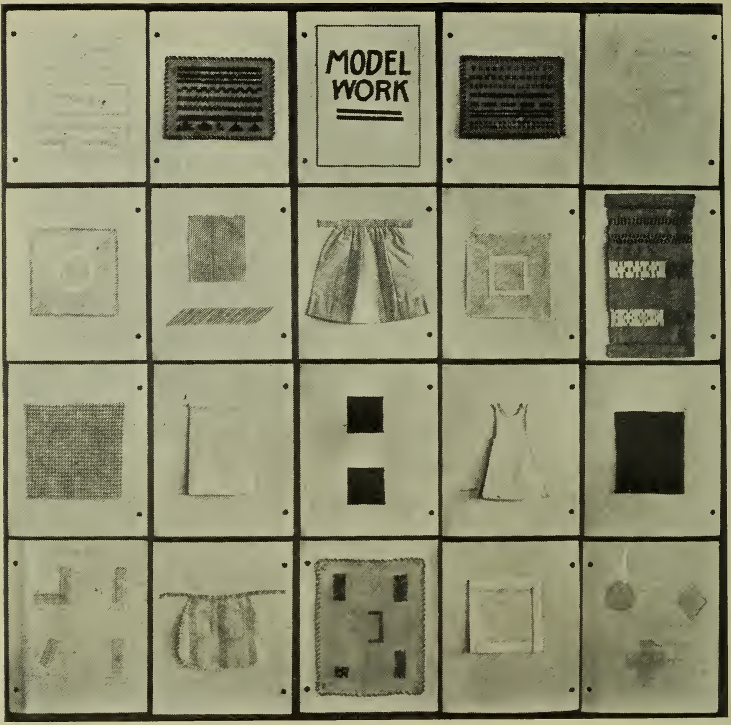
Women are receiving just what they demand. It is only within a recent date that the public has realized the amount of worthless material that has been placed upon the market.

Much has been done to better conditions regarding textiles by the Consumers' League. It is only a question of time before each state will pass laws prohibiting the selling of adulterated material unless properly marked.

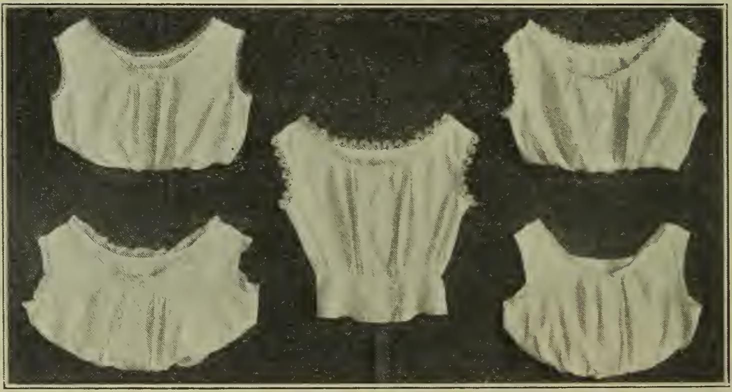
In the meantime every woman can do her share to better conditions by demanding better materials and by showing an intelligent understanding of the textile fabrics that are placed in her home.



Eighth-grade Work.



Model Work; Taught Only in the Teachers' Course.



Freshman Work.

FRUIT—ITS USE AND PRESERVATION.

Fruits, because of their low nutritive value, are not, as a rule, estimated at their worth as food. Fruit has great dietetic value, and should be used generously and wisely, both fresh and cooked. Fruits supply a variety of flavors, sugar, acids, and a bulk which has an important stimulating action in the intestines. They are generally rich in potash and soda salts and other minerals. Most fresh fruits are cooling and refreshing. The vegetable acids have a solvent power on the nutrients and are an aid to digestion when not taken in excess.

Fruit and fruit juices keep the blood in a healthy condition when the supply of fresh meat, fish and vegetables is limited and salt and smoked meats constitute the chief elements of diet. Fresh fruit is generally more appetizing and refreshing than cooked fruit. For this reason it is often eaten in too large quantities and frequently when underripe or overripe; but when of good quality and eaten in moderate quantities, it promotes healthy intestinal action and rarely hurts any one.

If eaten immoderately, uncooked fruit is apt to induce intestinal disturbances. If eaten unripe, it often causes stomach and intestinal irritation; if overripe, it has a tendency to ferment in the alimentary canal. Cooking changes the flavor and character of fruit, and while the product is not so cooling and refreshing as in the raw state, it can, as a rule, be eaten with less danger of causing stomach or intestinal trouble. If sugar be added to the cooked fruit, the nutritive value will be increased.

In the season when each kind of fruit is plentiful and at its best, a generous supply should be canned for the season when both fruit and fresh vegetables are scarce. A supply of glass jars costs something, but that item of expense should be charged to future years, as with proper care the breaking of a jar need be a rare occurrence. If there be an abundance of grapes and small, juicy fruits, plenty of juice should be canned or bottled for refreshing drinks throughout the year.

We preserve fruit that we may have it out of season. Even though we are able to get the fresh fruit when out of season in our communities, the price is often so high we can not afford to use as much as we need.

WHY DOES FRUIT SPOIL?

Spoiling of food is caused by the development of bacteria, yeasts or molds. Certain chemical changes are produced, as shown by gases, odors and flavors. Bacteria and yeasts exist in the air, in the soil and on all vegetable and animal substances. Bacteria are one-celled plants and can only be seen by aid of a microscope. They reproduce so rapidly that it has been estimated that one bacterium may give rise, within twenty-four hours, to seventeen million of similar organisms. The favorable conditions for growth are moisture, warmth and proper food.

Yeasts, which are also one-celled organisms, grow less rapidly. A bud develops, breaks off, and forms a new yeast plant. Some yeasts and some kinds of bacteria produce spores (specialized resistant cells, fitted to reproduce the species after a period unfavorable for growth). Spores may retain their vitality for a long time, even when exposed to conditions which kill the parent organism.

Molds are multicellular, and develop from spores which are very light and are always floating about in the air. They are a little heavier than air, and drop on shelves, tables and floors, and are easily set in motion again by the movement of a duster or brush. If one of these spores drops on a jar of preserves or a glass of jelly, it will germinate, if there be warmth and moisture enough present. Molds do not ordinarily cause fermentation of canned goods, although they are the common cause of decay of raw fruits. They are not as injurious to canned goods as are bacteria and yeasts. They do not penetrate deeply into liquids or semiliquids, but in time, at ordinary room temperature, they work all through solid substances which contain moisture. Bacteria do not develop in substances containing a large percentage of sugar, but they grow rapidly in a suitable moist substance which contains a small percentage of sugar. Yeasts grow very rapidly in dilute solutions containing sugar in addition to some nitrogenous and mineral matter. Fruits are usually slightly acid, and in general do not support bacterial growth.

Temperature is an important factor in the growth of bacteria and yeasts. Most kinds of bacteria are destroyed if exposed for ten or fifteen minutes to the temperature of boiling water; but if the bacteria are spore-producing, cooking must be continued for an hour or more to insure their complete destruction. In order to kill the spores, the article to be preserved must be cooked for a longer time at that temperature or at a higher temperature under pressure.

PRINCIPLES OF PRESERVATION.

1. Sterilization of food and all apparatus by the boiling temperature.
2. The removal of moisture by drying.
3. The addition of a preservative, *e. g.*, sugar, spices, salt, vinegar, etc.
4. Sealing to prevent the entrance of air, and with it microorganisms which produce fermentation.
5. To sterilize a substance is to destroy all life and sources of life in and about it.

Saucepans, spoons, strainers, etc., may be put on the fire in cold or boiling water and boiled fifteen minutes. Glass jars and covers should be put in cold water and heated gradually to the boiling point and then boiled for fifteen minutes. The jars must be taken one at a time from the boiling water at the moment they are to be filled with the boiling fruit. The work should be done in a well-swept and dusted room, and the clothing of the workers and the towels used should be clean.

SELECTION AND PREPARATION OF FRUIT.

The selection of fruit is one of the first steps in obtaining successful results. The time at which the fruit is at its best for canning and jelly-making is just before it is perfectly ripe.

All fruits should be freshly gathered, if possible, for preservation. No imperfect fruit should be canned or preserved. Gnarly fruit may be used for jellies or marmalades by cutting out defective portions.

Have plenty of hot water and pans in which jars and utensils may be sterilized. Have at hand all necessary utensils.

Prepare only as much fruit as can be cooked while it still retains its color and crispness. Before beginning to pare fruit, have syrup ready, if that is to be used, or if sugar is to be added to the fruit, have it weighed or measured.

The skins may be loosened on peaches and tomatoes by pouring hot water over them, removing from hot water and plunging into cold water.

Utensils Used in Canning.

Canned Fruit.

BEET SUGAR VERSUS CANE SUGAR IN JELLY MAKING.

It is said, by many people, that in order to have good jelly cane sugar must be used. This may have been true in earlier times, before the beet sugar had reached its present state of purification. Chemists agree that the structure and composition of the two sugars are identical.

Of course the cane sugar industry is older than that of beet sugar. Since beet sugar came into such prominence there has been much discussion as to the relative merits of the two. To settle this question for ourselves a series of experiments have been made and results noted.

The fruits used for jelly making were grapes and cranberries, equal quantities being used. Beet sugar was used in some cases and cane sugar in others. The juice was boiled until of a consistency to jell. The time for making the jelly was also noted in each case. It was found that not only did the beet sugar jell just as readily as the cane sugar, but in a shorter time in each instance.

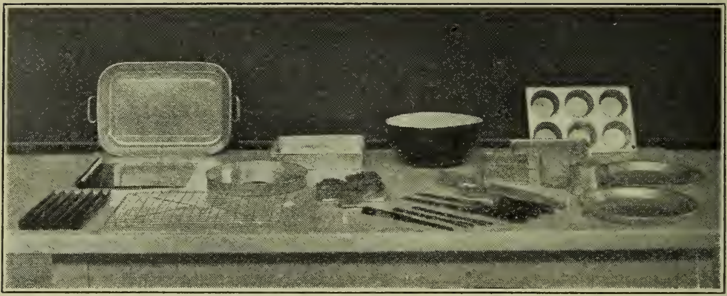
As beet sugar is cheaper per pound than cane sugar, and the cost of the fuel must always be considered, there are two economical points in its favor. So much beet sugar is now on the market that undoubtedly the housekeeper often uses beet sugar when she bought and paid for cane sugar.

As far as the appearance of the two sugars is concerned, the cane sugar may be finer grained than the beet, but that is due more to the manufacture than to the kind of sugar.

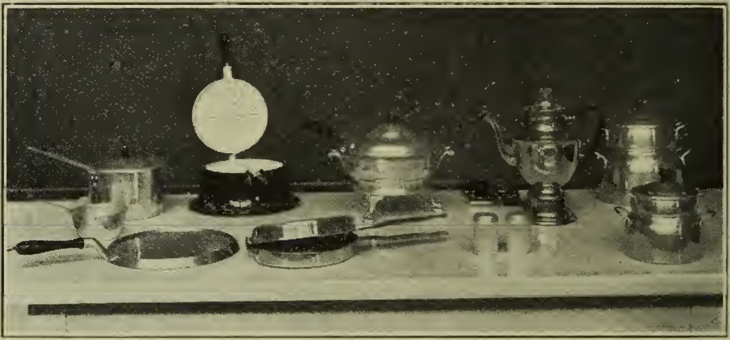
WHY WE SHOULD USE EGGS.

Eggs are served in a greater variety of ways and all more commonly eaten than any other article of diet of animal origin. Hens' eggs are the most common, although the eggs of geese, ducks and guinea fowls are sometimes used.

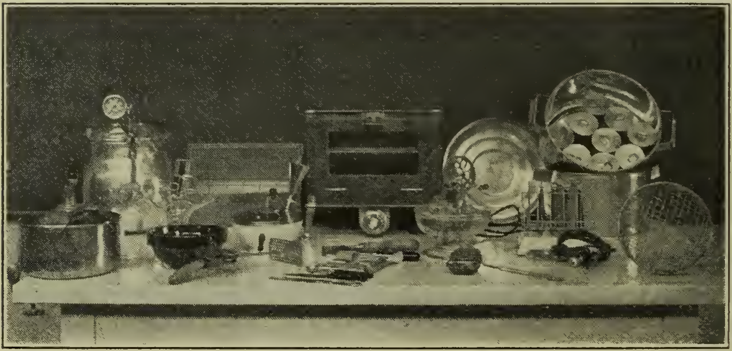
Eggs, like milk, form a typical food; that is, they contain a proportion of the fundamental food elements necessary to support the body. They consist chiefly of two nutrients — protein and fat — and in composition resemble such animal foods as meat, milk and cheese more than such vegetable foods as flour and potatoes. The water content is about the same as that of lean meat, and, having about the same composition as lean meat, are



Bread and Pastry Making.



Aluminum Ware.



Improved Kitchen Equipment.

a good substitute for it. A pound of eggs (nine) is considered equal in nutritive value to a pound of beef.

Eggs furnish three per cent of the total food used per person per day, cheese furnishing four per cent, and milk and cream together furnishing nineteen and nine-tenths per cent, beef and veal together furnishing ten and three-tenths per cent. From this we see that eggs compare favorably with the more common animal foods as regards the total food material furnished by them in the average daily diet. This shows that the high food value of eggs is appreciated and that they constitute one of the very important articles of diet in the American household.

Compared with other foods at the usual prices, eggs at twelve cents per dozen are a cheap source of nutrients; at sixteen cents per dozen, they are fairly expensive, and at twenty-five cents per dozen are expensive. Their value can not be estimated solely on the amount of nutrients furnished. They are valuable for giving variety to the diet and furnishing a light, easily digested food, especially suitable for breakfast or other light meals.

It has been found by experiment that coagulation of the white begins at 134° F., the whole mass coagulating at 160° F. (boiling), and continued the white becomes much harder and finally more tough and horn-like. These changes in the albumen lead us to think that it is not desirable to cook eggs in boiling water in order to secure the most satisfactory product. "Soft cooked," "medium cooked" and "hard cooked" eggs, all cooked at a temperature below boiling, are recommended.

One method of testing the quality of an egg is by "candling." Eggs are held up in a suitable device against a light. Fresh eggs appear unclouded and almost translucent; if incubation has begun a dark spot is visible; a rotten egg appears dark colored. Heat is the most prolific source of destruction of eggs.

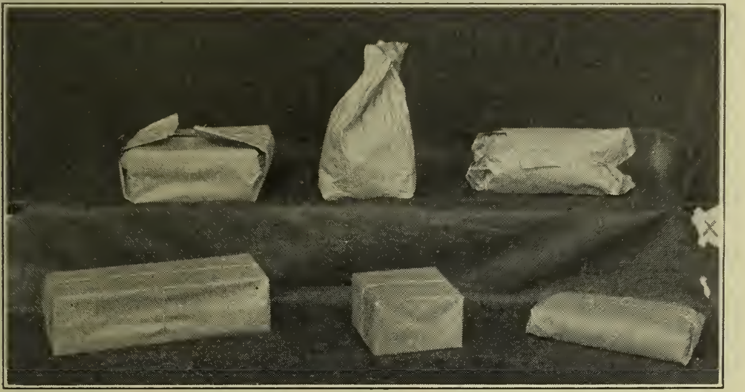
Eggs are preserved in a number of ways, cold storage being a good way. Of the preserving solutions used, water glass has given the best results. Use one part of water glass (silicate of soda) to nine parts of freshly boiled water. Eggs must be completely covered with the solution and kept in a cool place.

The commercial importance of the egg industry is considerable, and is increasing rapidly. At one time the United States imported a large number of eggs and exported but few; but conditions have changed, and now the exports largely exceed the imports.

A Cookery Demonstration.

THE COLD LUNCH PROBLEM.

Cold lunches are neither indigestible nor unappetizing if proper thought and care is put into the preparation of them. Too often the lunch basket contains whatever happens to be left when the time for packing is at hand. Because the food must be cold, greater effort should be made to make it wholesome and attractive. It is not so much hot school lunches that we need to plead for as better school lunches, packed in a more sanitary way.



The Right Way and the Wrong Way to Tie up a Lunch Box.

If the lunch is to be carried in a box or package it should be wrapped in clean paper, folded and tied in such a way that no dust, flies or other insects may enter the package. Paper bags left untied, and loosely-tied packages, may admit disease germs, as well as dust and dirt, which should never be allowed to enter food.

People who can afford to buy a good lunch pail for their children often allow them to carry their lunches in rusty pails, tobacco buckets or paper bags. A good lunch pail, properly equipped, may cost from 50 cents to $2.50. But why should parents hesitate to buy a receptacle which they know will add to the health and mental vigor of their child while in school?

The Right Sort of Lunch Receptacles.

The large enameled pail at the lower right side of the picture is new and well equipped. The heavy tin box is of such shape that a lunch for two persons might easily be packed in it, while above is a space into which a pint thermo bottle is fitted. This is especially important where children's lunches are concerned, as milk is a most nourishing and digestible food for younger children. A cup fits over the top of the bottle and may be used to serve the milk in at lunch time.

The Lunch-box Packed; the Food it Contains.

Desirable Foods for the School Lunch.

FOODSTUFFS THAT THE LUNCHEON SHOULD ALWAYS CONTAIN.

A substantial food of plain, nutritious and mild-flavored foods, as —

Sandwiches,
Bread and butter,
Brown bread,
Nut bread,
Peanut butter,
Sliced meat,
Minced meat, or ground,
Egg mashed and well seasoned,
Cheese, with cream, with olives, with pimento, and with nuts,
Lettuce,
Fruit, jellies, fruit butters, marmalades, preserves, ground figs and raisins.

Other substantial foods are sliced meats, fried chicken, hard-cooked eggs and baked beans.

Succulent foods should be used in the lunch, such as apples, apple sauce, baked apple, canned fruits in tight jars, oranges, any fresh fruit in season.

The dessert should be a wholesome one.

Rice pudding.
Cup custard.
Rennet custard.
Plain cakes.
Spice cakes.
Drop and rolled cookies.
Nuts and raisins.
Home-made candy occasionally.

DO WE EAT TOO MUCH?

A comparison of our average dinner menu with one of those illustrated will help to answer the question.

The amount required depends upon a number of conditions; namely, occupation, climate, age, sex, degree of health, etc.

According to Atwater, a woman at moderately active muscular work requires 2720 calories (heat units) in one day. A man at moderately active muscular work (like a carpenter or mason) requires 3400 calories, and a man at hard muscular work 4080 calories.

Meal for a man at moderately active work. The meal represents 46 grams protein and 1160 calories.

MENU.

Steak. Shrimp Cocktail. Cream Gravy.
Baked Potato on Half-shell.
Bread. Asparagus. Butter.
Banana Salad.
Baked Apple with Whipped Cream.
Coffee.

Portions of steak and cheese equal in amount of protein.
One-half pound steak. One-fourth pound cheese.

Meal for a woman at moderately active work. The meal represents 32 grams of protein and 914 calories.

MENU.

Celery. Bouillon. Olives.
Fried Chicken. Peas in Bread Cases.
Roll. Baked SweetPotato. Butter.
Brown Betty. Hard Sauce.
Coffee.

Meal for a man at hard muscular work. The meal represents 57 grams of protein and 1560 calories.

MENU.

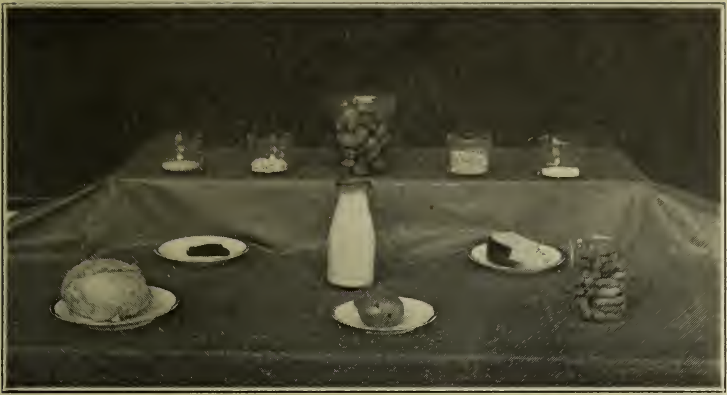
Oyster Cocktail.
Roast Veal. Cream Gravy.
Mashed Potatoes. Creamed Onions.
Tomato Salad.
Bread (four slices). Butter.
Lemon Pie. Coffee.

Portions of steak and peanuts equal in amount of protein.
One-half pound round steak. One-half pound peanuts.

Portions of some common foods which contain the same amount of protein as one pint of milk.

Reading from left to right, beginning with upper row:

		Pounds.
1.	Rice	.45
2.	Rolled oats	.21
3.	Apples	12.10
4.	Beans	.16
5.	Peanuts	.18
6.	Walnuts	.52
7.	Milk	1.10
8.	Almonds	.31
9.	Potatoes	2.01
10.	Cheese	.13
11.	Beef (round)	.19
12.	Eggs	.30
13.	Bread	.39

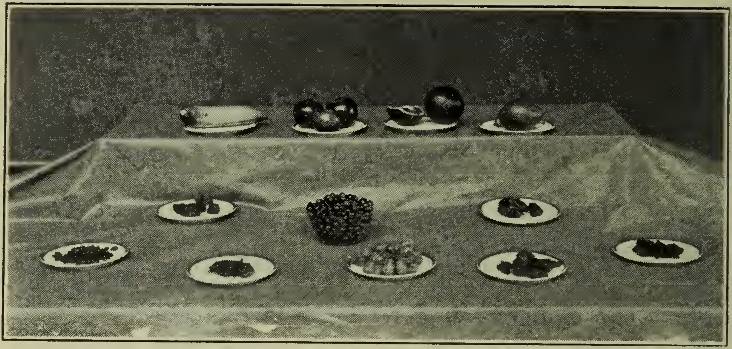


Portions of some common food materials which contain the same amount of carbohydrate as one pint of milk.

Reading from left to right, beginning with the upper row; weight in pounds:

1.	Rice	0.07
2.	Beans	.09
3.	Almonds	.57
4.	Rolled oats	.07
5.	Sugar	.05
6.	Figs	.07
7.	Milk	1.10
8.	Bread	.10
9.	Cabbage	1.10
10.	Potatoes	.37
11.	Peanuts	.29

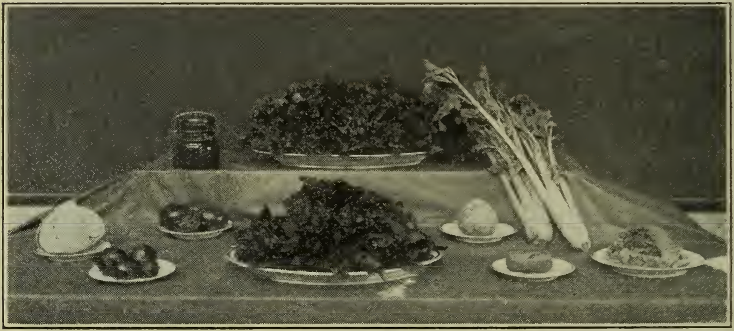
Utensils Used in Cooking Meats.



One Hundred Calorie Portions of Fruit.

Reading from left to right, beginning with upper row; weight in grams:

Banana	156.2
Apples	212.3
Orange	268.1
Pear	177.3
Prunes	39.1
Cranberries	214.6
Dates	32.0
Currants (dried)	31.1
Figs	31.6
Grapes	138.1
Dried apricots	36.0
Raisins	32.2



One Hundred Calorie Portions of Vegetables.

Reading from left to right, beginning with upper row; weight in grams:

Canned tomatoes	442.5
Lettuce	632.9
Fresh tomatoes	438.6
Spinach	418.4
Turnip	253.8
Celery	671.1
Cabbage	317.5
Onions	227.6
Potatoes	120.0
Asparagus	552.5

CUTS OF MEAT AND THEIR USES.

The quality of meat is dependent on the condition of the animal from which it is derived. The animal should be in perfect health and well fed. Methods of slaughter, transportation and preservation all affect the quality of beef. There should be little or no odor, and the meat should be firm and elastic to the touch.

STRUCTURE OF MEAT.

In order to understand the difference between tough and tender cuts, we must be familiar with the structure of the muscles.

Each fiber consists of bundles of fibers, held together by connective tissue. In tough meat, the muscle tubes are thicker and there is more connective tissue present. Exercise strengthens the muscle, and this accounts for the fact that the unexercised muscles of the young animal give us softer meat. In the mature animal, the muscles most exercised furnish the tough meat, and the less used muscles the tender meat. Thus the tough meat comes from the neck and legs, the tender cuts from the middle of the back, the toughness increasing as the cuts approach the neck and hind legs.

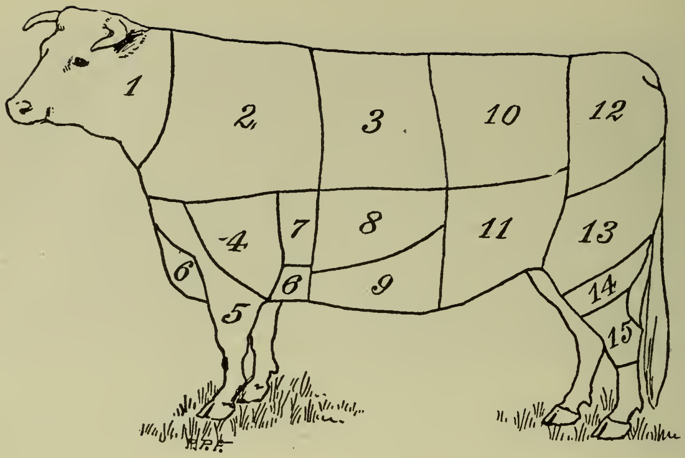
Exercise toughens the muscle, but, if moderate, is considered desirable, in rendering the animal healthy and the meat finer flavored. Beef has the finest flavor and is most tender when kept as long as possible before using. Three weeks is usually the shortest time allowed for this curing, when conditions of storage are such as to permit.

SELECTION OF BEEF.

A good quality of beef is firm, fine grained and bright red in color, and the fat a yellowish white. Old beef is dry, coarse and dark. A distinction should be made, however, between mere surface discoloration, which results from exposure to air, and discoloration due to the age of the animal.

CUTS OF BEEF

In cutting up a beef, the body is first cut through the backbone, laying it open in sides, or halves. Each half is divided into quarters, called the fore quarter and hind quarter. The methods of cutting beef, veal, mutton and pork into parts and the terms used for the different "cuts" vary in different localities. The lines of division between the cuts will vary slightly, according to the usage of the local market. The general method of cutting is that indicated in the diagram.



An average fore quarter weighs about two hundred pounds. It is divided into

1. Neck.
2. Chuck.
3. Ribs.
4. Shoulder blade.
5. Fore shank or shin.
6. Brisket.
7. Cross ribs.
8. Plate.
9. Navel.

The muscles of the fore quarter have, on the whole, more exercise than those of the hind quarter, to toughen, and this renders the meat of the fore quarter of a less desirable and cheaper grade. It is used chiefly for canned meat, stews, soup meat and corned beef. The neck is best for mincemeat. The chuck lies back of the neck and includes the first five ribs. This cut may be used as cheap steak, roast, pot roast or stew. The ribs are used for roasts and constitute the best of the fore quarter. The "end of the ribs" is a desirable piece for corned beef. The brisket is preferred by some for corning. The shin is used for soup meat.

The hind quarter consists of the following cuts:

10. Loin.
11. Flank.
12. Rump.
13. Round.
14. Second cut round.
15. Hind shank.

The entire loin is frequently called the sirloin. The choicest steaks and roasts are cut from this part. After removing the first two slices from the end where the loin joins the ribs, the tenderloin begins to appear. It lies on the under side of the loin and, being protected, is very tender. The entire tenderloin is used for what is known as a fillet.

The rump is used for steaks or roasts, while the less desirable parts are used for pot roasts. The part nearest the loin is best.

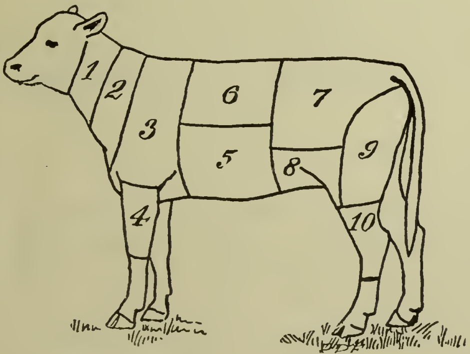
The round is divided into top and bottom. The outside is laid on the block when ready to cut up and is therefore called the bottom round, while the inside, being on top, is called the top round. The bottom of the round, being nearest the skin, is tougher. It is used for hamburg steak and stews. The top round is used for steaks and makes very good beef tea. The flank is usually corned, or may be stuffed, rolled and braised.

To summarize: The best cuts for steaks and roasts, in order of their desirability, are loin, ribs, best of the rump cuts, and chuck. The most desirable pot roasts—top of round, cheaper rump cuts, flank and leg; for corning--brisket, rump, chuck, blade, shoulder; for stews--flank, leg.

VEAL.

While veal is in season all the year in many markets, it is best in spring and summer, being at its prime in May. Six to ten weeks is the preferable age at the time of killing. The healthy meat is fine grained, tender and white, with a tendency to pink.

The cuts of veal are similar to those of beef, except that they are simpler.



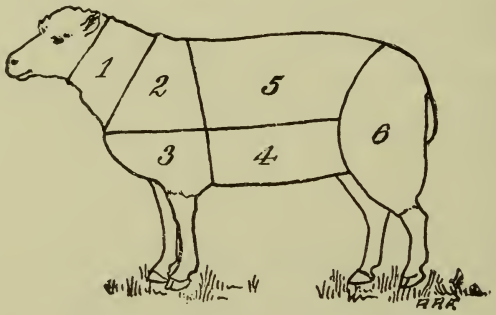
1. Neck.
2. Chuck.
3. Shoulder.
4. Fore shank.
5. Breast.
6. Ribs.
7. Loin.
8. Flank.
9. Leg.
10. Hind shank.

The head is frequently used for soup and the brains cooked in various ways. The neck may be used for stew. The fore quarter weighs six to twelve pounds, and is sometimes bound and rolled for a roast. The loin, including all that is loin and rump in the beef, makes an excellent roast. The leg is the choicest cut for roasts or cutlets. The shoulder is also used for roasts. The breast is good for stew. The knuckle of veal corresponds to the shin in beef, and is excellent for soup.

MUTTON AND LAMB.

Lamb is the name applied to the animal until one year old, after that it is mutton. Mutton and lamb are in season the year round. The best mutton is from an animal not over five years old, plump, with small bones. The cuts are as follows:

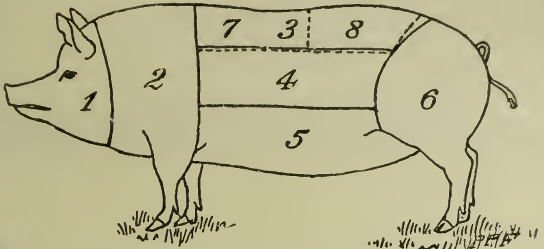
1. Neck.
2. Chuck.
3. Shoulder.
4. Flank.
5. Loin.
6. Leg.



The leg is considered the best roast. The fore quarter or the shoulder, boned and rolled as in beef, is an excellent roast. The ribs and loin may be used for roasts or cut into chops. The shoulder, breast and best part of the neck are excellent for stews and pot roasts. The neck is used for soup, being rich in flavor and nutriment.

PORK.

Pork is best in autumn and winter. A large part of the animal is so fat that it is salted and sold as salt pork. The ribs and loin are the most desirable fresh cuts, being used for roasts or chops.



1. Head.
2. Shoulder.
3. Back.
4. Middle cut.
5. Belly.
6. Ham.
7. Ribs.
8. Loin.

The hams and shoulders are more frequently cured, but also sold as pork steak. The tenderloin proper is a comparatively lean and very small strip of meat lying under the bones of the loin. Bacon is secured by smoking the fat pieces of salt pork, in addition to the salting process. The middle cut is the portion quite generally used for bacon.

THE EFFECT OF HEAT UPON MEAT.

Fat is melted. The meat fiber shrinks and hardens with intense heat; on the other hand, it softens at a temperature somewhat below the boiling point of water.

The structure of the muscle has an important relation in the cooking of meat. If the muscle cells are cut across, the contents will escape. Then, too, if the muscle is heated, the juices will pass through the membrane of the cell. This also happens if the meat is put into cold water. The substances in the juices of the meat which are not coagulated by heat are called extractives, because they can be extracted by hot water. The most valuable protein matter remains behind in the muscle cell, however. Among these proteins is that known as meat albumin, and this behaves in cooking very much as does the white of egg, that is to say, it coagulates.

Keeping these facts in mind, the principles of meat cookery may be stated as follows:

1. Juices retained.

In broiling, panbroiling, roasting and boiling, the higher temperature coagulates the meat albumin and hardens the fiber on the surface, thus forming a coating which prevents the further escape of juices. The temperature should then be lowered to prevent further shrinking and hardening of the fiber in the interior of the meat. With a thick steak, after the surface searing, the cooking may be completed in the oven.

2. Juices extracted.

Beef tea or beef juice may be made by leaving chopped beef in a jar and placing the jar in hot water; or for beef tea and ordinary soup, by putting the chopped meat in cold water and heating water slowly.

Table Set for Formal Luncheon.

MENU.

Bouillon.
Celery. Olives.
Creamed Oysters in Ramekins.
Veal Loaf. Duchess Potatoes.
Rolls. Butter.
Hindoo Salad. Cheese Straws.
Nesselrode Pudding. Rolled Wafers.
Coffee. Mints.

Tray for Tuberculosis Patient.

Chicken Bouillon. Croutons.

Scraped Beef Balls. Baked Potatoes in Shell.

(White of egg added.)

Bread and Butter.

Milk. Lemon Snow.

(Egg and gelatin.)

Tray for Diabetes Patient.

Orange.

Broiled Steak. Spinach.

Asparagus Tips.

Gluten Gem. Butter.

Tomato Salad.

(Stuffed with celery and nuts.)

Floating Island.

(Sweetened with saccharine.)

College Class in Cookery.

HOUSEHOLD PHYSICS.

The aim of the course in Household Physics is so to relate the theories and principles of physics to the every-day environment of the student that she may study their operation in and their application to the affairs of the household. By means of the knowledge thus gained she is aided in the economic selection and intelligent use of household appliances.

With this aim in view the course has been so arranged that the first year's work, given in the third year of high school, develops the principles of physics, while the second year's work considers their applications. The first year's work is largely a laboratory course, in which the students perform a large number of experiments, using for that purpose appliances found in the ordinary home instead of the stereotyped laboratory apparatus never seen elsewhere. By taking accurate measurements under varying conditions, data are secured from which systematized facts and principles are worked out. Some of the typical experiments performed in the study of heat are a comparison of the conductivity of the various materials used in the manufacture of cooking utensils, such as aluminum, graniteware and iron, for the purpose of discovering which is most efficient; a study of the use of the steam-pressure cooker; measurement of the efficiency of a gas hot-plate, and the determination of the cost of operation per hour of a Welsbach light and a gas heater. In the study of light, the candlepower of various household lights is measured, and the candlepower of carbon filament lamp compared with that of the Tungsten. Some typical electrical experiments are the installation and operation of an electric door bell; the measurement of the efficiency of an electric iron and its cost of operation; a comparison of the cost of operating various kinds of electric lamps, and the determination of the cost per candlepower per hour. Various other experiments of a similar nature constitute the chief part of the high-school course.

Dining Room.

THE FIRELESS COOKER.

Perhaps of the many so-called "labor-saving devices," one of the best is the fireless cooker. The electric fireless cooker is an especially fine one for small family use. As yet the cooker of this type on the market is small and would not serve the purpose for a large family.

Dinner Prepared in Fireless Cooker.

In the college course the subject is taught chiefly by means of lectures, demonstrations and inspection trips. The various materials used in home construction and equipment are studied. The methods of constructing and finishing the various articles of furniture are taken up. A thorough study is made of the standard makes of various utensils and appliances, comparing them in regard to cost and efficiency. The labor-saving devices used in the kitchen are discussed as to utility and economy. Household plumbing is studied, and the various forms of fixtures and the method of installing them is observed from inspection of such articles in every-day use. The whole problem of construction, furnishing, heating, ventilating, lighting and plumbing a home is studied in detail, so that any student may have a thorough working knowledge of standard forms and makes, enabling her to exercise well-founded judgment in the equipment of a home.

One unit of high-school credit is given for the former course, while the latter is a two-hour course, extending through one year.

FURNISHING A HOME.

Be it in the humble cottage of the poor or in the spacious mansions of the rich, on the wide sweep of the country or in the crowded confines of the city, the secret of success in the furnishing of a house is not to be stated in definite terms. We desire to have our homes furnished in good taste, but good taste does not mean that expensive materials must be used, for art does not depend upon cost; nor that we must conform to transient styles of the day, for beauty is not a matter of style; nor shall we find success in furnishings which belong to periods of long ago, for taste is not a matter of antiques. Mr. Morris, the master craftsman, gave to us the rule, "Have nothing in your house that you do not know to be useful and believe to be ornamental." Too many houses are ugly and uncomfortable because the owner has tried to make a display, either of his wealth or in attempting to give an impression that he has wealth.

If the occupants of the house are to enjoy happy lives, the furnishings must give a feeling of satisfaction, contentment and comfort. Simplicity is the first great essential, the simplicity of purpose that aims to satisfy the physical and esthetic desires. One should be surrounded by objects which bring pleasant sensations and thoughts, but only when these objects meet the individual requirements of those who live in the house can success be attained. Each object brought into the house to be a part of the home life must have a purpose and a reason for being where it is placed; it must be subordinated to the practical needs. These practical needs are not far to seek: conveniences for the serving of meals, comfort in resting, reading, writing, music and sleeping.

Let there be no over-decoration to distract the eye. Harmony is found when there is nothing in the room which calls attention to itself. The room must have repose — the first essential in good design. Harmony, or the lack of harmony, will be found in the atmosphere of our homes whether or not we are conscious of it. Taste in decorating is partly an inborn quality, partly the result of experience, and partly the acquirement of education. The average person has a dull color sense, and responds to the violent stimulus of strong contrasts, and when these effects have caught his attention he believes that he is pleased. Balanced or soft harmonies he considers to be monotonous. He lacks the refinement of feeling that comes with education. Certain colors were created to rest and to restore the tired eyes — the greens and browns of the woods and fields, the silver grays, the soft, clouded atmospheric effects, which bring peace and happiness.

The "atmosphere" of a home should form a background for the personality of the owner, for it will unconsciously shape his thoughts and feelings. The home is the most vital thing in our lives — where we live and rest and grow into our ideals. We must give to its furnishing our most earnest study if we are going to make it indicate the best which is in us. May we express in our homes the plain living and high thinking that is opposed to superfluity, assertiveness, that we may make our lives, in the words of John Milton, "simple, sensible and sublime."

THE LITTLE RED SCHOOLHOUSE.

The day of the rural school is at hand. The graded school, the high school, the college and university have had their day of the almost undivided attention of the educational specialist. We take pride in our public school system, and our institutions of higher education, but during the time this great work has been progressing the field of the rural school has been receiving little attention. It has been evident to all that the country school has not kept pace in its development with that of the town and city school. To-day no field in education offers such opportunity for constructive work. But the rural school is coming into its own, and instead of magazine articles on how to keep the boy on the farm, and back-to-the-soil agitation, the boy and girl of the rural school are going to receive advantages and training which will satisfy them and fit them for a larger, broader life on the farm.

Why do so many boys and girls want to leave the farm? It is because they want advantages educationally and socially which country life does not afford. It is because they have never been trained to see the beautiful possibilities and opportunities, and they are taught from childhood that there is too much work for the amount of profit, and no time for play, which every child demands and every adult should have.

The country girl, as well as the country boy, should study all phases of agriculture. This study will give her an appreciation for farm work, and she will enter into the life and work of the farm because the study has opened up to her the possibilities of such a life. When the girl finds pleasure in country life the boy will be more willing to remain on the farm. There should be nothing in the entire education of these country-born youths to rob them of the love of the country, and there should be much in their education to enlarge their appreciation of the possibilities which country life offers.

The "little red schoolhouse" has appealed to our poetic imagination in the past, but we have reached the stage when we are no longer satisfied with poetic imaginations regarding rural education. The rural school of to-day must fulfill the greatest crying need in education. It must give the boys and girls a fair chance with the boys and girls of the town or city. The school must afford workshops for the boys and kitchens and cupboards for the girls, and yards and gardens for all. The yards must be fitted with playground equipment for all ages of students and the play must be directed. The whole plant should be one which will attract not only the youths of the community to its doors, but the grownups will make this a meeting place, where questions of common interest can be studied and worked out together.

Better teachers are needed in the rural schools. College graduates, who have rural sympathies, are none too good for the rural school. Worthy teachers in this field will draw worthy salaries; then we shall have rural school work brought up to the professional standard.

MILLINERY.

The milliner has been called the queen of hypnotists, and rightly has she been named, for she seems to have the power of changing the minds of those who come under her magic wand.

The world consists of all classes; namely, the refined woman, the strong woman, the pretty woman, but all fall prey to the milliner.

What a pity that a countenance that nature has made attractive must be made ridiculous by an unbecoming hat. Why is it that a woman will consent to have her beauty marred, for the milliner, with admiring ejaculations, will make her think every hat was fashioned for her face. No distinction is made between youth and old age; the fat-faced and the thin-faced; thick-haired and thin-haired; each clasps the hat selected upon her head and rejoices in her stylishness.

Of course the milliner is interested in selling what she has, but that is no reason why a woman should buy any hat that is not suited to her style.

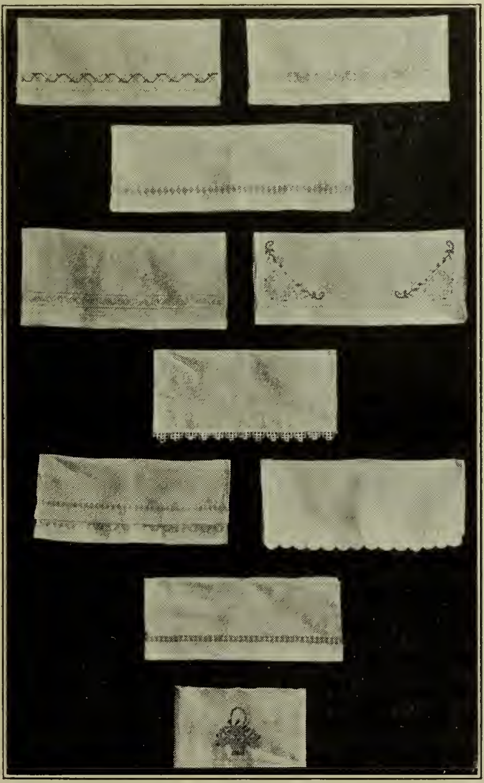
Is there any reason for the milliner having better taste than the woman who wishes to select a hat? Every woman should study her own face and be sure that it means something to her.

No woman should select a hat that emphasizes the undesirable lines in her face, or wear a color that is unbecoming, no matter what is the prevailing style.

Adaptation to one's own individuality means harmony, and every woman should know her own face and have due regard to its possibilities.

Allan Pope says:

> "Hats are creations of hideous mien,
> As to be hated need only to be seen;
> But seen too oft; familiar to the eye,
> We first endure, then waver and buy."



Art Needlework.

ART OF DRESSMAKING.

We are past the time when the good dressmaker buys the patterns she uses. To-day she must be able to originate designs and adapt prevailing styles to the peculiarities of different individuals. She must be not only a designer, who draws and makes plans, but she must also be able to make patterns according to sketches brought her by customers; she must be able to copy any design found in pictures and fashion journals.

The dressmaker must not only understand how to choose the style or lines becoming to the form of her customer, but she must also study the lines and expression of the face. A girl whose mouth droops should not wear a tunic pointed at the sides, making the drooping of the mouth all the more prominent. Yesterday we would have laughed at the idea of a dressmaker having to study the disposition and temperament of her customer, but to-day we know a high-tempered girl is almost uncontrollable when clothed in red. A loud, boisterous girl appears much more so when dressed in bright, gaudy colors, while a little, timid woman is almost insignificant in dark, dull colors.

Skillful and artistic dressmaking is the result of thorough education in all details. After we have studied color, form, lines, material best suited for different figures, how to dress in the latest fashion and yet dress becomingly, then we must study drafting, designing, draping and reproducing.

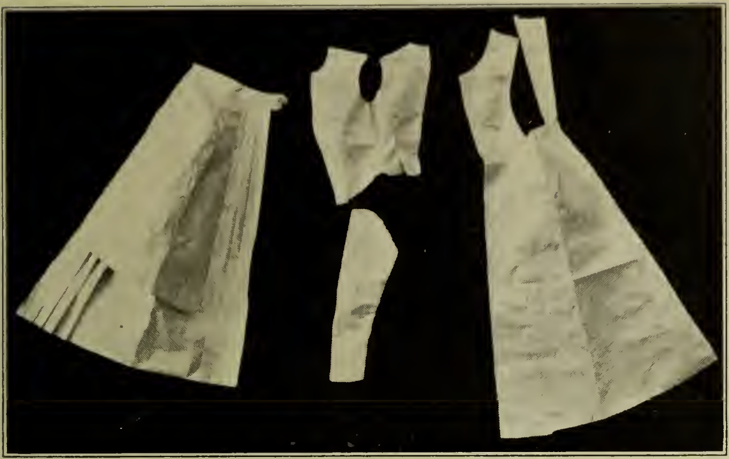
There is no success without a good foundation. The carpenter who would build a house without first building his foundation would build a poor one. So it is with the dressmaker who tries to make a garment before she has drafted and designed her pattern to the actual measurements of the individual who is to wear the garment.

To be successful in dressmaking, the measurements must be taken correctly; the pattern must be drafted and tested to the measurements; the garment must be well made. It has been said, "A garment well basted is a garment half made." The student should be taught the use of the drafted pattern. If a commercial pattern, she must know how to test and alter it to suit the form. She should be taught how to lay her pattern on the material, the economical way of cutting to save material, tailor basting, basting, finishing, padding, pressing, shrinking,

Skirts Made by Students.

putting on of hooks and eyes, facings, boning of waists, and the different ways of finishing seams and plackets. Every girl could have more and better dresses if she knew how to make them. She will appear much better dressed if she has been trained to study dress from the dressmaker's point of view, and she will become a much better wife and mother if she can practice the economy which comes from being able to direct the buying of the materials and the making of the garments worn by the members of her household.

Paper Models Assist the Student in Putting the Garment Together.



PATTERN-MAKING AS A VOCATION.

System means a saving of time, labor and money. We can not only save money by being able to make patterns, but we can make money. There is always a demand for good designers. Many ladies like to create their own styles, and would do so if they could get patterns made to carry out their own ideas. Pattern-making is fascinating work; it gives the student a broader knowledge of form, and lines, and develops originality. While it enables her to do her own dressmaking, it enables her to do dressmaking for others. There is a greater demand now for patterns cut to measure than ever before. Fashion demands it. Cut-to-order patterns; if the patterns are correctly drafted they do not need altering. The demand for good designers and pattern-makers far exceeds the supply.

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